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Entrepreneurial Characteristics, Education, and Intention: Does Sustainability Orientation Matter?

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Abstract

Entrepreneurship education plays a pivotal role in equipping individuals with the skills and mindset needed for entrepreneurial endeavors. This study investigates how entrepreneurial attributes and entrepreneurship education affect business students' inclinations to become entrepreneurs. It focuses on how entrepreneurial education has affected business graduates' ambitions in Bangladesh, using entrepreneurial characteristics and education as predictive variables. Data was collected from 410 respondents across public, and private universities in Bangladesh, employing a conclusive research approach with purposive sampling. AMOS-SEM was employed to analyze entrepreneurial intentions, while preliminary analyses were conducted using SPSS to address various factors. The results highlight the complexity of entrepreneurial intention, revealing that it is significantly affected by two key traits (innovativeness and self-confidence) and entrepreneurship education. Notably, the study uncovers a strong moderating influence of sustainability orientation on the association between entrepreneurial intention, entrepreneurship education, and innovativeness. The study also emphasizes the importance of the connection between entrepreneurial drive in Bangladesh and the need for autonomy and achievement. However, the study found autonomy has little to no impact on Bangladeshi business graduates' preferences to become entrepreneurs, and the need for achievement does not significantly affect their intentions. This study has meaningful implications for both academia and practical entrepreneurship endeavors. This research investigates the moderating effects of sustainability orientation on entrepreneurial education and traits, highlighting the significance of these elements in the particular context of Bangladeshi business graduates.

Keywords: Entrepreneurial Characteristics, Education, Intention, Sustainability Orientation, TPB

1. Introduction

Youth is a valuable resource in any country because of their contribution to economic and social development. They are also the driving force for the national advancement of any country (Aharonovich, 2019). In Bangladesh, significant portions of youth are graduate and postgraduate students. According to the annual report of the University Grants Commission (UGC), there were approximately 4.7 million undergraduate and postgraduate students in 50 public and 107 private universities in 2020 (Rahman et al. 2022). This remarkable working force is expected to engage in different productive activities while completing their studies. Many scholars such as Honeyman (2020) assert that the active participation of the young generation benefits economic activities. However, Rahman et al. (2022) noted that a skilled young population is an asset for any nation if they are used in various productive operations such as production, operation, financing, management, and marketing. The context might be different if the majority of this large segment remains unemployed, which can threaten a nation's social, economic, and political stability (De Guzman et al., 2020). This is because youth unemployment can lead to demoralisation human capital depreciation, and social exclusion (Vogel, 2015). These unemployed graduates may gradually lose skills and increasingly suffer mental frustration or social alienation (Uju & Racheal, 2018), which is also connected to family instability. In addition, it affects psychologically and has a long-term impact that can increase the risk of future unemployment or wage penalties (Bell & Blanchflower, 2019).

Every year, thousands of students obtain their bachelor's and master's degrees from universities. Most of these students enter the job market, but a significant number remain unemployed. As a result, the graduate unemployment situation in Bangladesh is an alarming concern. For instance, the unemployment rate among university graduates is reported to be higher than that among high school graduates (Rashid & Islam, 2020). In such cases, the development of entrepreneurial endeavours can be a viable economic activity. Entrepreneurial activity benefits society in numerous ways, such as the creation of jobs, enhancement of productivity, reorganization and diversification of the economy, and reduction of market inefficiencies through the creation of a more dynamic and competitive marketplace (Lyons & Zhang, 2018).

Entrepreneurship education is also crucial for unemployment alleviation to foster an aspiration to become a successful business owner. Anyone interested in starting a business can benefit from formal entrepreneurship education (Nowiński et al., 2019). Thus, a pressing need exists for universities to teach students entrepreneurial skills (e.g., how to identify and support start-ups). In most cases, Bangladesh relies on the natural supply of entrepreneurial talent. To address the role of entrepreneurship on students' attitudes and knowledge, Ajose (2021) asserts that entrepreneurship knowledge directly affects their plans to start businesses. Researchers believe that entrepreneurship learning can be provided through education and training to develop entrepreneurial intentions among students (Westhead & Solesvik, 2016). Earlier studies have identified that people with entrepreneurship education and training are also greater likelihood to launch a business than those who do not (Gielnik et al., 2019). Numerous models and theories, including Shapero's Entrepreneurial Event Model (SEE) (Shapero & Sokol, 1982), Ajzen's Theory of Planned Behaviour (TPB) (Ajzen, 1991), the Theory of Planned Behaviour Entrepreneurial Model (TPBEM) (Krueger & Carsrud, 1993), and the Social Cognitive Career Theory (SCCT) (Lent et al., 1994), have extensively studied entrepreneurial intention. Nevertheless, few of these studies have focussed on the cross-border context in which entrepreneurial intention is influenced (Giacomin et al., 2011). Prior studies tended to focus on developed countries and comparisons between developed and developing countries (Rahman et al., 2022), while empirical evidence from a least developed country was lacking. According to Nabi and Holden (2008) and Ramalho et al. (2022), cross-cultural study is essential to understanding the connection between entrepreneurship and behaviour of individuals and culture. Furthermore, Mehta et al. (2022) found a sizable research gap in the entrepreneurial skills of nursing university students with regard to sustainable development.

Therefore, many researchers, scholars, and academicians have asserted the importance of entrepreneurship and its role in sustainable development. However, very few studies, related to sustainable orientation and entrepreneurship have been initiated in the context of least-developed countries. In addition, the nexus between students' entrepreneurial characteristics and entrepreneurship education and their entrepreneurial intentions is still less explored the global context. In order to address these gaps, the present study examines the entrepreneurial characteristics and education of business students in Bangladesh. The objective of the study is to examine the

influence of entrepreneurial traits (such as inventiveness, self-confidence, need for achievement, and autonomy) and entrepreneurship education on graduates' intent to become entrepreneurs, with a focus on the contribution of sustainable orientation. In addition, the goal of this study is to provide in-depth insights and understanding for policymakers and researchers on university students' entrepreneurial endeavours to identify future business start-ups.

2. Theoretical Underpinning

The study makes use of the Theory of Planned behaviour (TPB), a well-known conceptual framework for understanding human behaviour. In research like those by Ramadani et al. (2022), it has previously been demonstrated that entrepreneurial intention is a reliable predictor of entrepreneurial behaviour. The Theory of Planned Behaviour (TPB), which has been used to examine both organisational and individual behaviour, was built upon the Theory of Reasoned Action (TRA), which Icek Ajzen refined in 1991. Additionally, TPB components were adjusted to examine entrepreneurial behavioural intention using the Shapero and Sokol-developed entrepreneurial event model, which was first used in 1982. It is used by researchers in several disciplines, like as business and psychology, to analyse behavioural patterns in people. Several intention-based models have been utilised by researchers in the field of entrepreneurial research to examine entrepreneurship activities, and the findings indicate a strong justification for doing so. Due to this, a lot of academics have thought about using the TPB model to study entrepreneurial actions and goals (Schlaegel & Koenig, 2014). Important factors that affect how people behave in companies, such as individual attitudes, subjective standards, and perceived behavioural control, are all taken into consideration by the TPB model. Explanatory intention (EI) theory has frequently been used to explain entrepreneurial intention in earlier studies (Van-Gelderen et al., 2008). This approach successfully explains how environmental and human variables interact (Sivarajah & Achchuthan, 2013). The antecedents of this theory, such as entrepreneurial intention, individual attitudes, subjective standards, and perceived behavioural control, have an impact on individual behaviour. Moreover, it is necessary to forecast how much effort a person will put into the activity. People are more likely to engage when they strongly desire to participate in a particular activity.

2.1 Hypothesis Development

Innovativeness

The ability of a business to actively engage in and promote new ideas, inventive thinking, research, and experimentation directed towards new products, systems, or technical advancements is known as innovativeness (Lumpkin & Dess, 1996). Entrepreneurship and innovation are connected because innovation is an essential element for entrepreneurs and is vital to the entrepreneurial process (Melati et al., 2018). Innovation's primary goals include the development of novel consumer items, essential services, and inventive systems and processes. Entrepreneurs use innovation to find answers, address ongoing issues, and create new goods or services (Melati et al., 2018). It would be interesting to explore the relationship between innovativeness and entrepreneurial intention. Thus, we postulate that;

H1. Innovativeness positively influences university students' entrepreneurial intentions.

Self-Confidence

According to Wilson et al. (2007), self-confidence is a person's view of their capabilities and skills. It further influences how they perceive themselves as achieving their goals (Kasouf et al., 2015). As it reflects their belief that it is possible to accomplish this, even when the course of action may be dangerous for others, self-confidence in entrepreneurial situations implies that it can predict people's ability to create new enterprises (Piperopoulos & Dimov, 2015). Setting and achieving more difficult goals is easier for an entrepreneurial person who has self-confidence. Taking into account this general notion, a self-confident entrepreneur is a person who prefers to develop his or her businesses. Therefore, self-confidence is a crucial characteristic among entrepreneurs, especially

those who have just started, and is therefore thought to be one of the determining factors of entrepreneurship (Arenius & Minniti, 2005). Therefore, we formulate the hypothesis

H2. Self-confidence positively influences university students' entrepreneurial intentions.

The need for achievement

An individual's ambition and quest to accomplish major tasks or objectives are the need for achievement. People with a great desire for success are highly self-motivated because of their strong desire for success. Barba-Sanchez and Atienza-Sahuquillo (2017) found that an entrepreneur's motivation for starting a business depends on his or her ability and desire to do so. Entrepreneurs driven to succeed are more likely to set up new businesses. According to Staniewski and Awruk (2015), entrepreneurs' ambition to own enterprises is influenced by their drive for self-realization and self-satisfaction. Additionally, Barba-Sanchez and Atienza-Sahuquillo (2017), have shown that engineering students' desire to succeed is a significant factor in their decision to establish their businesses. Thus, students' entrepreneurial aspirations are influenced by their desire to succeed. Moreover, Koh (1996) points out that the desire for accomplishment is the most well-known psychological attribute associated with entrepreneurship. This personality trait has been shown to strongly correlate with entrepreneurial intention (Karimi et al., 2015). Therefore, the following can be hypothesized;

H3. The need for achievement positively influences university students' entrepreneurial intentions.

Autonomy

According to Douglas and Shepherd (2000), a positive attitude towards autonomy includes the preference to enjoy independence and vice versa. However, people with a high level of independence experience relatively low marginal disutility from more autonomy in decision making. People with more positive attitudes towards autonomy and a greater preference for decision-making autonomy are expected to spend more time searching for self-employment opportunities. As a result, entrepreneurial intentions and self-determination that may be intrinsic or extrinsic are the driving forces behind human action (Bilal et al., 2021). Autonomous or self-motivation includes intrinsic and some forms of extrinsic motivation. Research has demonstrated that self-employed persons have greater control over their lives than those who work in traditional jobs (Schneck, 2014). As a result, entrepreneurship is likely a career choice for those who want autonomy or independence. Therefore, the above context supports to hypothesise that:

H4. Autonomy in the workplace positively influences university students' entrepreneurial intentions.

Entrepreneurship education

Entrepreneurship development is essential for the economic development of any country and is considered the outcome of current business education. This argument is much more vital for future generations since they will be the corporate leaders of the future and the driving force of economic progress (Bilal et al., 2021). In a substantial number of studies, scholars have affirmed that human resource development depends primarily on education and training (Ravindran & Iyer, 2014). From that cornerstone, it is possible to impart useful knowledge on starting new businesses through effective entrepreneurship education. According to this point of view, Wang et al. (2022) contend that education in entrepreneurship may inspire individuals to seek entrepreneurial professions. According to Uddin et al. (2022), students who take part in academic entrepreneurship programmes have a higher likelihood of starting their own businesses in the future. For instance, 124 scientific and engineering students participating in entrepreneurial programmes at British and French institutions were surveyed by Souitaris et al. in 2007. They discovered that the programmes strengthened students' propensities for entrepreneurship. In a separate study, Kolvereid and Moen (1997) found that graduates of a Norwegian business school with an entrepreneurship degree were more likely to start their businesses than those with other majors. Consequently, students who graduate from entrepreneurship programmes may have the drive, skills, and information necessary to start their own businesses

(Astiana et al., 2022; Duong, 2022). Hence, entrepreneurial education has been seen to substantially impact entrepreneurial intention. Thus, it can be postulated that;

H5. Entrepreneurial education positively influences university students' entrepreneurial intentions.

Moderation of the Sustainability Orientation

Entrepreneurship for sustainable development carries an emerging promise that people may seek entrepreneurial opportunities due to market inefficiencies to reap the rewards of entrepreneurship. Entrepreneurially-minded people may explore possibilities they anticipate to avail a greater outcome. Nowadays, a question has been raised about whether market defects may lead to equal or more significant potential for entrepreneurial success (Barbosa et al., 2022). In such cases, market inefficiencies exist when marketers merely focus on profitable investment possibilities with better returns instead of long-term consequences (Sanstad & Howarth, 1994). For instance, saving energy can be a potential opportunity that would not likely attract the attention of someone solely concerned with maximising economic cost. Nevertheless, a potential entrepreneur who is more concerned with sustainability may be interested in opportunities with more significant sustainability benefits rather than depending on profitability.

At the beginning stage, the characteristic approach was an early solution to determine what elements influence entrepreneurial intention. In other words, entrepreneurial goals and activity are attributed to their personality, and self-efficacy, risk-taking inclination, or optimism are considered influential personal factors (Mitchell et al., 2002). According to Robinson et al. (1991), a person's personality appears to be too reductionist because entrepreneurial activities occur in different circumstances and in close contact with other people and the environment. The TPB model (Ajzen, 1991) has influenced many subsequent models that have examined entrepreneurial intentions by including contextual elements (Krueger et al., 2000). According to Lüthje and Franke (2003), these elements should be separated into perceived barriers to and support for entrepreneurship about entrepreneurial education. However, to better understand attitudes towards behaviour in relation to sustainable enterprise, it is necessary to include the sustainability orientation of the individual as an additional variable. Recent studies on students' entrepreneurial intentions have recently attracted the attention of entrepreneurship researchers (Ajzen & Fishbein, 1977; Souitaris et al., 2007), and sustainability orientation is predicted to have a substantial moderating impact on the antecedents of students' attitudes, subjective norms, and behavioural control. Based on the considerations mentioned above, we can formulate the following hypotheses:

H6: A strong sustainability orientation enhances the connection between innovativeness and entrepreneurial intention.

H7: A strong sustainability orientation enhances the connection between self-confidence and entrepreneurial intention.

H8: A strong sustainability orientation enhances the connection between the need for achievement and entrepreneurial intention.

H9: A strong sustainability orientation enhances the connection between autonomy and entrepreneurial intention.

H10: A strong sustainability orientation enhances the connection between entrepreneurship education and entrepreneurial intention.

Figure 1 represents the conceptual framework of this study.

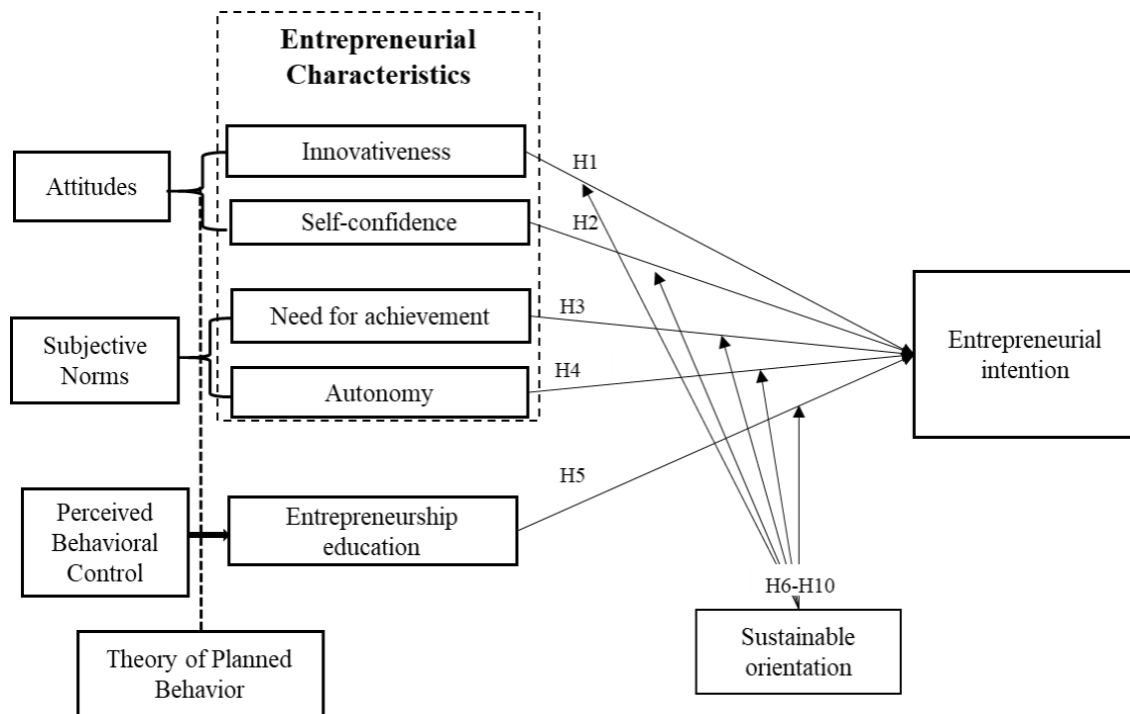


Figure 1: Conceptual model of the study

3. Methodology

3.1 Research Design

This study used a conclusive research design (Neelankavil, 2015) specifically designed to test the hypothesis. The main benefit of such a research design is that it is the only reliable method for proving that altering one item has a discernible effect elsewhere (Erickson, 2017). This approach yields reliable results when executed correctly.

3.2 Sample Size and Sampling Technique

The study applied purposive and convenience sampling techniques to select respondents for the study. To gain a deeper perspective and expertise of a particular setting, we purposefully chose business graduates rather than students from other disciplines. The main objective of purposive sampling is to ensure that the sample is more adequately related to the aim of the research (Yang et al., 2020). We used a convenient sample strategy because of time restrictions (Etikan et al., 2016). In the initial phase of this study, 20 students from public and 15 from private universities were interviewed to determine the feasibility of the questionnaire. However, the study employed Slovin's method to determine the sample size because the large population size and students' behavioral intentions are unknown (Pai-Rajesh & Alathur, 2019).

$$n = \frac{N}{1 + Ne^2}$$

Where,

n= denotes the sample size.

N= corresponds to the total population under consideration.

e =signifies the researcher-determined marginal error, which, in this case, has been set at 5%.

3.3 Target Population

Students at universities in Bangladesh made up the study's target population. More specifically, students studying in different business disciplines at private and public universities were considered as the target population of this study. In Bangladesh, many university graduates join various job sectors during or after their studies. Although the employment rate among university students is high, a substantial number of students in Bangladesh are not interested in starting ventures due to several obstacles, including lack of entrepreneurial knowledge and skill, lack of capital, lack of managerial skill, and lack of social acceptability. To determine these university students' entrepreneurial intentions, this research gathered data from a targeted population across the country.

3.4 Instrument Development

The primary data of this study were collected using a quantitative survey technique. All constructs were assessed using a Likert scale with a maximum of five points (Strongly disagree to strongly agree is indicated by a 1 to 5).

Innovativeness: five measuring items were used to assess inventiveness, which was (a) "I think innovation is important to me," (b) "I think innovation can improve the effectiveness of my study," (c) "I think that I am the most creative student compared to my mates," (d) "I like to experiment with new ideas," and (e) "I seek out new ways to do things." Measurement items of innovativeness were adapted from Mueller and Thomas (2001).

Self-confidence: According to Gelaidan and Abdullateef (2017), self-confidence is a human emotion that refers to trust in one's abilities, talents, and judgement. The research by Turker and Sonmez Selçuk (2009), which examined students' real levels of self-confidence and their capacity to manage future business endeavours, is used to investigate five components of self-confidence.

Need for achievement: An entrepreneur's motivation for starting a business depends on the ability and desire to act accordingly (Barba-Sanchez & Atienza-Sahuquillo, 2017). In doing so, entrepreneurs' ambition to own enterprises is influenced by self-realization and self-satisfaction (Staniewski & Awruk (2015). Five questions taken from Lai et al. (2010) were used to assess the need for achievement.

Autonomy: According to Lumpkin and Dess (1996), autonomy is constrained by ownership rights and may vary depending on the degree of centralisation or delegation. This could be related to the size of the organisation. A total of 5 items were adapted to examine autonomy; all were selected from Al Mamun et al. (2017)

Entrepreneurship education: Eight measurement items were adapted from Duong et al. (2022) and Maziriri et al. (2022) to determine entrepreneurship education. Measurement items include course outline, lecture delivery, teaching approach, and lecture notes.

Entrepreneurial intention: Entrepreneurial intention determines how people become interested in starting their business. A total of 8 items representing actual intention (e.g., I intend to set up a company in the future) and self-prediction (e.g., "My professional goal is to become an entrepreneur") were utilised by Chen et al. (1998) and Tounès and Fayolle (2006), who used a multi-component measure to isolate the individual components that influence entrepreneurial intent.

Sustainability orientation: Measurement items to examine sustainability orientation were adapted from Kuckertz and Wagner (2010) and Tounès and Fayolle (2006). who used sustainable orientation to describe entrepreneurship as a whole. For example, students calculated the amount of time and effort it would take to contribute significantly to society's sustainability. Students were categorised into low and high groups based on a median split of their sustainability orientation to examine the moderating effects on the relationship among innovativeness, self-confidence, autonomy, need for achievement, entrepreneurship education, and entrepreneurial intention. To avoid wasting time and resources, the direct influence of sustainability orientation on entrepreneurial intention was ignored.

3.5 Data collection

This study employed a self-administered questionnaire to gather information from an individual survey. Before proceeding with the final data collection, the questionnaire was reviewed by four industry experts. After screening and review, three questions were dropped out, and 24 questions were re-modified to fit the study context. The questionnaire included two sections: section A covered demographic information, including age, income, gender, education level, etc.; in Section B of the questionnaire, there were questions pertaining to three main components and many sub-factors that would be able to moderate the impact of sustainable orientation on the relationship between entrepreneurial attributes and education in terms of the intention to pursue entrepreneurship. This section served as the primary source of data collection. Five enumerators, experts in data collection, were employed to conduct the physical survey. Students were given complete freedom to participate or even withdraw their participation. Respondents' full consent was confirmed to participate in the survey, and no gifts or allowances were provided to them. Data collection started in January 2023 and ended in March 2023. The survey took approximately 25 to 30 min to complete.

3.6 Data Analysis

Typically, the moderating impact evident in the literature on entrepreneurial intentions was analysed using AMOS-SEM (Brunel et al., 2017). In addition, preliminary analyses such as missing values, normality, linearity, demographics, and Statistical Package for Social Science (SPSS) were used for descriptive analysis. The maximum likelihood and two-step techniques (measurement and structural models) proposed by Anderson and Garbing (1988) were employed in this study. At the beginning of the analysis, it was seen how well and valid the instruments used to measure the constructs were. In the second step, the hypotheses proposed for this study were tested.

4. Results and Discussion

The demographic information for the respondents (N=410) is summarised in Table 1. The results in Table 1 indicate that 65.6% of participants were males and 34.4% were females. Most participants (below 30 years of age) were in the younger age group (e.g., cumulative value 96.4%). In terms of age, 46.8% of participants were between the ages of 21 and 23, while 43.9% were between the ages of 24 and 26. In most cases (83.4%), the participants were unmarried. Notably, 89.3% of the respondents were Muslims, 8.8% were Hindus, and 1.9% were of other religions (such as Christians, Buddhists, and others). As the study's objective is to understand the influential determinants of the university student's entrepreneurial intention, only the students in the fourth year (64.4%) and master's or MPhil (35.6%) participated in this research. Among these respondents, all students were from business schools, and the majority (55.9%) were from private universities. In the context of professional experience, the % of the students engaged in tuition. Regarding family income, most participants (31.5%) reported their family income between BDT 20,000 and BDT 30,000, while around 20% (the second largest portion) reported income between BDT 31,000 and BDT 40,000 per month.

Table 1: Demographics of the respondents

Demographic Variables	Frequencies	Percentages	Cumulative Percentages
Gender			
Male	269	65.6%	65.6%
Female	141	34.4%	100.0%
Age			
Below 20	8	2.0%	2.0%
21-23	192	46.8%	48.8%
24-26	180	43.9%	92.7%
27-29	15	3.7%	96.4%
30 or above	15	3.7%	100%
Marital Status			

Married	68	16.6%	16.6%
Unmarried	342	83.4%	100.0%
Religion			
Islam	366	89.3%	89.3%
Hindu	36	8.8%	98.1%
Christian	3	0.7%	98.8%
Buddhist	4	1.0%	99.8%
Others	1	0.2%	100.0%
Level of Education			
Freshman (1st Year Undergraduate)	0		
Sophomore (2nd Year Undergraduate)	0		
Junior (3rd Year Undergraduate)	0		
Senior (4th Year Undergraduate)	264	64.4%	64.4%
Masters/ M-Phil	146	35.6%	100.0%
PhD	0	0%	100.0%
Others	0	0%	100.0%
Field of Study			
Business	410	100.0%	100.0%
University Category			
Private	229	55.9%	55.9%
Public	181	44.1%	100.0%
National			
International			
Previous Experience			
Business	78	19.0%	19.0%
Entrepreneurship	48	11.7%	30.7%
Tuition	151	36.8%	67.5%
Others	133	32.4%	100%
Family Income			
20-30 k BDT	129	31.5%	31.5%
31-40 K BDT	80	19.5%	51.0%
41-50 K BDT	77	18.8%	69.8%
51-60 K BDT	51	12.4%	82.2%
61 or above	73	17.8%	100.0%

4.2 Principal Component Analysis

Principal Component Analysis (PCA) with varimax rotation was used in this investigation. The findings showed a significant Bartlett's test of sphericity ($p < 0.05$) and a high Kaiser-Meyer-Olkin (KMO) score of 0.956. According to Tabachnick and Fidell (2014), both of these values were over the suggested cutoff, demonstrating the suitability of the sample. The study found seven components that together accounted for 67.71% of the total variance and had eigenvalues greater than 1.0.

4.3 Multivariate Assumptions

The study employs several multivariate tests before undertaking the structural equation modelling (SEM) study to measure the appropriateness of the acquired data for further examination. According to Hair et al. (2010), the data to be used in SEM should be free from outliers (e.g., missing values, straight lines, and out ranged values) and multicollinearity issues. In addition, the collected data should confirm that they are normally distributed.

According to Kline (2015), Pearson's skewness and kurtosis criteria were employed to assess the data's normality. Skewness scores between +3 and -3 and kurtosis values between +7 and -7 are the recommended ranges for determining data normalcy. Table 3 reveals that all values fit within this satisfactory range, confirming the data's normal distribution.

When researchers use self-reporting and self-sourced research designs, common method bias (CMB) is a typical issue that might occur. The 41 items in this study were employed to analyze all components utilizing Harman's single-factor test in order to solve this problem. According to Podsakoff et al. (2003), the variance of a single factor is suggested to be less than 50% as a cut-off number to ensure that CMB does not affect the results. The results (as given in Table 3) demonstrate that the variation of the single component is 40.017%, which is within the acceptable range and less than the 50% barrier. As a result, the dataset confirms that it is free from the CMB problem.

Finally, to address the multicollinearity issues, the variance inflation factor (VIF) and associated tolerance level were applied. The VIF thresholds and tolerance should be no greater than 10 and no less than 0.10 (Kline, 2011). Table 5 demonstrates that all VIF and tolerance levels remain within the accepted range. This implies that there is no problem with multicollinearity among the constructs.

Table 2: Mean, standard deviation, Variance, Skewness and Kurtosis Values

	Mean	Std. Deviation	Variance	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
EI1	3.6854	1.06099	1.126	-.567	.121	-.233	.240
EI2	3.3854	1.04321	1.088	-.251	.121	-.627	.240
EI3	3.6512	1.05951	1.123	-.581	.121	-.298	.240
EI4	3.4024	1.09745	1.204	-.324	.121	-.514	.240
EI5	3.6171	1.07070	1.146	-.487	.121	-.442	.240
EI6	3.4951	1.01636	1.033	-.366	.121	-.440	.240
EI7	3.8244	1.13981	1.299	-.687	.121	-.466	.240
EI8	3.6976	1.11721	1.248	-.556	.121	-.400	.240
IN1	4.0951	.90811	.825	-1.035	.121	.913	.240
IN2	4.1317	.89400	.799	-.963	.121	.767	.240
IN3	3.7122	.88459	.782	-.362	.121	.150	.240
IN4	3.9610	.84694	.717	-.678	.121	.282	.240
IN5	3.9805	.85907	.738	-.730	.121	.415	.240
NA1	3.9780	.89388	.799	-.721	.121	.179	.240

NA2	3.9878	.89133	.794	-.892	.121	.847	.240
NA3	3.8317	.90013	.810	-.471	.121	-.209	.240
NA4	4.0317	.89905	.808	-.752	.121	.066	.240
NA5	3.8805	.85808	.736	-.398	.121	-.367	.240
AT1	4.2878	.90102	.812	-1.184	.121	.742	.240
AT2	4.2195	.84530	.715	-1.142	.121	1.318	.240
AT3	4.1683	.83239	.693	-1.014	.121	1.003	.240
AT4	4.0634	.79477	.632	-.907	.121	1.161	.240
AT5	4.0951	.77126	.595	-.711	.121	.570	.240
SC1	3.9707	.89230	.796	-.939	.121	1.129	.240
SC2	3.9220	.90029	.811	-.876	.121	1.014	.240
SC3	3.9780	.88564	.784	-.848	.121	.797	.240
SC4	3.9049	.88631	.786	-.808	.121	.904	.240
SC5	3.9902	.85066	.724	-.915	.121	1.237	.240
EE1	3.8488	.93900	.882	-.674	.121	.051	.240
EE2	3.8927	.94762	.898	-.737	.121	.107	.240
EE3	3.9024	.98658	.973	-.801	.121	.197	.240
EE4	3.9195	.90684	.822	-.809	.121	.657	.240
EE5	3.9317	.88741	.788	-.689	.121	.184	.240
EE6	3.8951	.96198	.925	-.799	.121	.340	.240
EE7	3.9659	.93233	.869	-.769	.121	.153	.240
EE8	3.8805	.90522	.819	-.577	.121	-.003	.240
SO1	3.7634	.93564	.875	-.700	.121	.366	.240
SO2	3.8976	.93779	.879	-.813	.121	.524	.240
SO3	3.8463	.93469	.874	-.610	.121	.058	.240
SO4	3.9171	.91065	.829	-.675	.121	.294	.240
SO5	4.0122	.87192	.760	-.869	.121	.834	.240

4.4 Measurement Model

The measurement model's overall goodness-of-fit rating is in line with suggestions made by Doll et al. (1994) and Hu & Bentler (1999), suggesting a good fit. The results show, specifically:

$$\chi^2 = 1383.431$$

$$\chi^2/\text{degree of freedom (DF)} = 1.825$$

$$\text{Goodness of Fit Index (GFI)} = 0.857$$

$$\text{Comparative Fit Index (CFI)} = 0.943$$

$$\text{Tucker-Lewis Index (TLI)} = 0.938$$

$$\text{Root Mean Square Error of Approximation (RMSEA)} = 0.045, \text{ with a significance level of } p=0.000.$$

Refer to Table 3 for a breakdown of the measurement model's 41 elements and its seven components. According to the criteria set out by Fornell and Larcker (1981), all estimated constructs had good reliability, as evidenced by Composite Reliability (CR) values ranging from 0.851 to 0.917 and Cronbach's alpha values ranging from 0.85 to 0.917. Additionally, the Average Variance Extracted (AVE) ranged from 0.536 to 0.673, and factor loadings ranged from 0.632 to 0.868, all exceeding suggested levels, confirming the convergent validity of the measurement model (Fornell & Larcker, 1981; Hair et al., 2014).

Table 3: Item Loadings of Constructs with CR, AVE, and Cronbach 's Alpha Values

Constructs	Items	Loading	CR	AVE	Cronbach's Alpha
Entrepreneurial intention (EI)	EI1	0.701	0.910	0.561	0.910
	EI2	0.632			
	EI3	0.806			

	EI4	0.705			
	EI5	0.795			
	EI6	0.797			
	EI7	0.772			
	EI8	0.767			
Innovativeness (IN)	IN1	0.816	0.876	0.588	0.875
	IN2	0.787			
	IN3	0.639			
	IN4	0.804			
Need for Achievement (NA)	NA1	0.746	0.890	0.620	0.889
	NA2	0.826			
	NA3	0.75			
	NA4	0.868			
	NA5	0.737			
Autonomy (AT)	AT1	0.814	0.911	0.673	0.910
	AT2	0.859			
	AT3	0.838			
	AT4	0.795			
	AT5	0.794			
Self-Confidence (SC)	SC1	0.791	0.906	0.660	0.911
	SC2	0.815			
	SC3	0.836			
	SC4	0.805			
	SC5	0.813			
Entrepreneurial Education (EE)	EE1	0.755	0.917	0.580	0.917
	EE2	0.789			
	EE3	0.795			
	EE4	0.78			
	EE5	0.782			
	EE6	0.746			
	EE7	0.74			
	EE8	0.699			
Sustainable orientation (SO)	SO1	0.739	0.851	0.536	0.850
	SO2	0.841			
	SO3	0.738			
	SO4	0.649			
	SO5	0.679			

Table 4 displays the inter-correlations between the constructions indicated by non-diagonal components, and the diagonal elements correspond to the square root of AVE. All diagonal items in their respective rows and columns were greater than non-diagonal elements, matching the requirements for acceptable discriminant validity proposed by Fornell and Larcker (1981). Furthermore, all inter-correlation factors were significantly below the 0.85 threshold value, indicating that multicollinearity was avoided in the analysis (Kline, 2015).

Table 4: Discriminant Validity (Fornell-Larcker Criterion)

	SC	EI	IN	NA	AT	EE	SO
SC	0.812						
EI	0.509	0.749					
IN	0.697	0.554	0.767				
NA	0.613	0.469	0.706	0.787			

AT	0.667	0.417	0.685	0.714	0.820		
EE	0.580	0.468	0.501	0.508	0.583	0.761	
SO	0.627	0.579	0.646	0.532	0.465	0.544	0.732

4.5 Structural Model and Hypothesis Testing

The structural model showed good goodness-of-fit measures, with the following fit indices: $\chi^2 = 1349.461$ $\chi^2/DF = 1.780$. Root Mean Square Error of Approximation (RMSEA) = 0.044 Goodness of Fit Index (GFI) = 0.860 Comparative Fit Index (CFI) = 0.946. With a significance threshold of $p=0.000$, the Tucker-Lewis Index (TLI) was 0.942, and the Standardised Root Mean Squared Residual (SRMR) was 0.0425. The great validity and dependability of the model are shown by the alignment of these fit indices with the suggested ranges set out by Doll et al. (1994) and Hu & Bentler (1999).

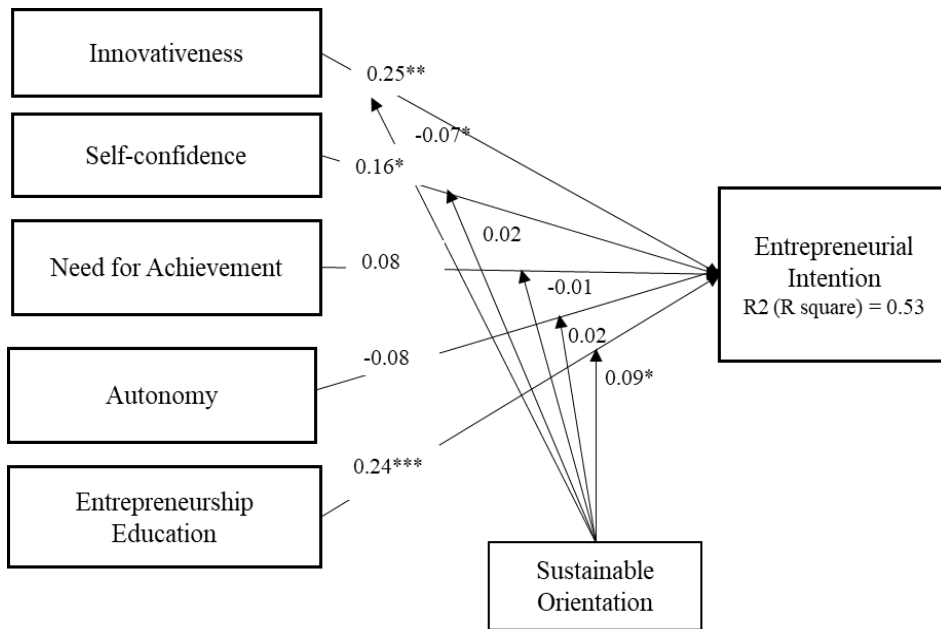
The study explores the impact of five antecedents on the dependent variable, entrepreneurial intention, in Table 5 and Figures 3 and 4. 53% of the variability in entrepreneurial intention is explained by these antecedents taken together ($R^2=0.53$). Following self-confidence ($=0.16$, $t=2.465$, $p=0.014$) and entrepreneurship education ($=0.24$, $t= 4.105$, $p=0.000$), innovativeness showed the most positive effect on entrepreneurial intention ($=0.25$; $t=3.072$, $p=0.002$). As a result, this study provides evidence in favour of hypotheses H1, H4, and H5.

However, the association between the need for achievement and entrepreneurial intention ($\beta=.082$, $t=0.159$, and $p=0.247$) and between autonomy and entrepreneurial intention ($\beta=-0.080$, $t=-1.088$, and $p=0.276$) were identified as insignificant. This suggests that H2 and H3 were not supported.

In the moderating effect, the results show that sustainable orientation strongly moderates the ties between innovativeness and entrepreneurial intention and between entrepreneurship education. Hence, H6 and H10 were accepted. It's crucial to note, though, that sustainable orientation was shown to have a negligible moderating impact on the associations between the need for autonomy, self-confidence, and accomplishment and entrepreneurial ambition. Therefore, the study did not support H7, H8, and H9.

Table 5: Standardized Estimation and Hypotheses Testing

Hypothesis No.	Hypothesis			Estimate (Standardized)	S.E.	t-Values	P-Values	Decision
H1	EI	<---	IN	.253	.104	3.072	.002	Yes
H2	EI	<---	NA	.082	.076	1.159	.247	No
H3	EI	<---	AT	-.080	.100	-1.088	.276	No
H4	EI	<---	SC	.164	.080	2.465	.014	Yes
H5	EI	<---	EE	.242	.078	4.105	0.000	Yes
SRMR				0.0425				
R ²				0.53				
Moderation Effects								
	EI	<---	SO					
H6	EI	<---	IN_X_SO	-.070	.033	-2.108	.035	Yes
H7	EI	<---	NA_X_SO	-.001	.041	-.032	.975	No
H8	EI	<---	AT_X_SO	.017	.037	.467	.641	No
H9	EI	<---	SC_X_SO	.015	.036	.429	.668	No
H10	EI	<---	EE_X_SO	.093	.039	2.365	.018	Yes



(Note: *** $p < 0.0001 < ** p < 0.001 < * p < 0.01$)

Figure 2: Results of the Proposed Model

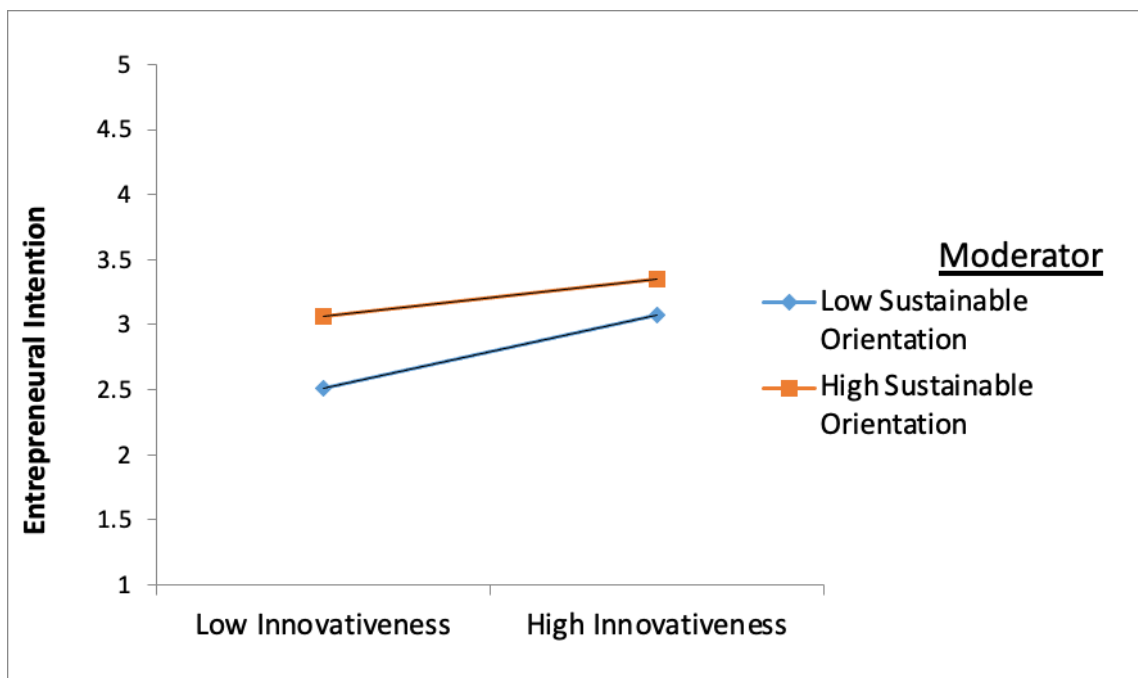


Figure 3: Sustainability's Moderating Role: Innovativeness and Entrepreneurial Intent

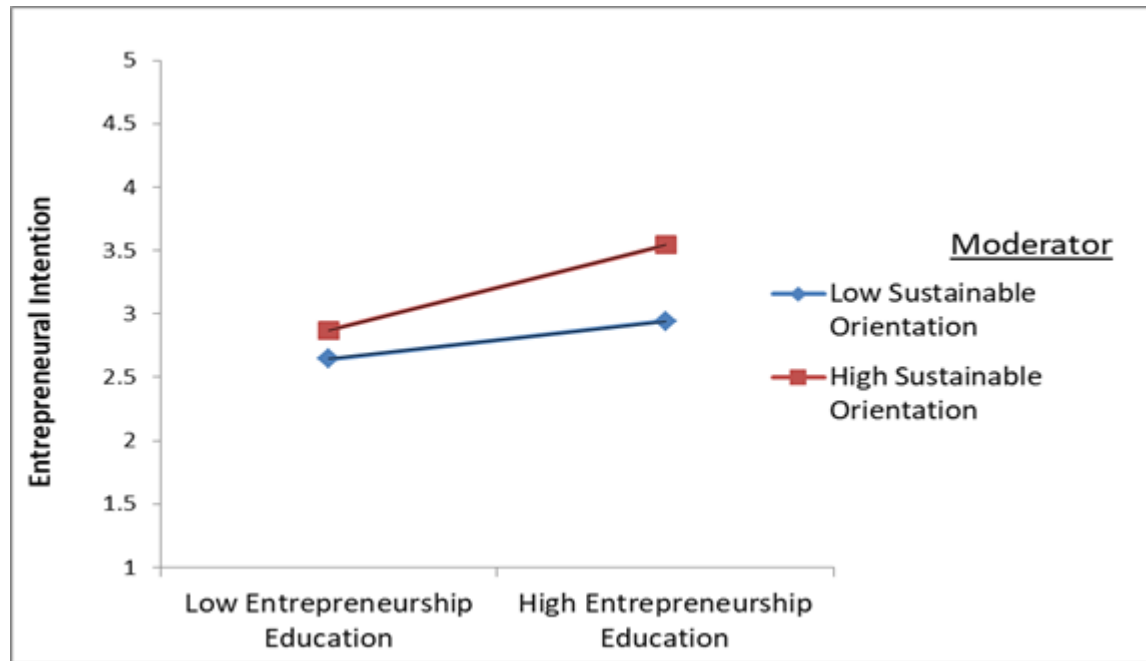


Figure 4: Sustainability's Moderating Role: education and Entrepreneurial Intent

4.6 Discussion

This study's main objective was to evaluate the impact of entrepreneurial education on business graduates in Bangladesh who were interested in starting their own businesses. It did this by using entrepreneurial traits and entrepreneurship education as predictors. Researchers in this study developed ten hypotheses intending to reach a decision. On the basis of the findings, the discussion has been segmented into several sections. The first finding was that innovativeness significantly and positively affects business graduates' intentions to start their own businesses in Bangladesh. Similar findings have been found in earlier research from Asian and European countries (Wathanakom et al., 2020). The findings stated that students with several entrepreneurial characteristics, including innovativeness skills, can easily understand which drives need to be taken to start a business.

Another hypothesis indicates that entrepreneurship education significantly enhances the entrepreneurial intent of Bangladeshi graduates. These results are in line with other studies carried out by Saptono et al. (2020) and Wardana et al. (2020) in Asia and Europe. According to study by Slavtchev et al. (2012), earlier studies have emphasized the importance of entrepreneurship education in spreading knowledge about it as a viable career option. For instance, classes in new business creation or business planning offered through entrepreneurship education may improve a student's self-employment chances and tendency to take entrepreneurial risks. Business graduates are three times more likely than non-business graduates to launch new businesses, which is consistent with the fact that business education typically emphasizes technical knowledge for business administration (Charney et al., 2000). These results demonstrate how simple it is for students to comprehend that launching a new business is challenging. In addition, entrepreneurship education can help students develop the information, abilities, standards, and values that boost their self-efficacy and encourage them to pursue entrepreneurial goals.

Nonetheless, a strong relationship has been found between self-confidence and entrepreneurial intentions among graduate students. Students with self-confidence tend to take entrepreneurial initiatives in the future. A similar result has been noticed in many earlier studies. For example, Turker and Selcuk (2009) stated that entrepreneurial intentions appear to be related to self-confidence, risk-taking, and locus of control. Additionally, Koh (1996) conducted an empirical study to determine whether self-confidence levels differ between entrepreneurially minded students and those who are not. According to his research, entrepreneurially inclined business students are more self-assured than those who are not.

Therefore, two hypotheses have been rejected, explained in the following section. First off, there is no statistically significant relationship between autonomy and the ambition of business graduates in Bangladesh to start their own firm. Although this finding is inconsistent with the results of a previous study conducted by Al-Mamary and Alshallaqi (2022), the results of our study can be justified from a Bangladeshi perspective. In Bangladesh, students need more autonomy when starting any career initiative. Societal and family influences significantly impact students' career decisions in Bangladesh (Zayed & Tumpa, 2016). According to a previous study, graduates of Bangladeshi universities are influenced mainly by aspiration for an ideal occupation, external locus of control, dependency on others, and family preferences. Therefore, the findings of our study are consistent in the studied country context. Second, it is proved that the need for achievement does not influence entrepreneurial intentions. In Bangladesh, graduate students are barely concerned about their future achievements. Most of the students are worried about this situation in which they belong. Although the need for achievement is one of the crucial factors of entrepreneurial characteristics, students think this kind of aspiration is optional to start a business. According to a study by Ida Ketut (2019), the need for achievement may not be a single component that motivates graduate students to start an entrepreneurial venture.

However, this study also endeavored to study the moderating effect of sustainability orientation in the relationship between observed and unobserved variables. This notable finding underscores that sustainability orientation has a positive moderating effect on the connection between entrepreneurship education and the entrepreneurial intentions of graduate students in Bangladesh. According to the previous literature and empirical findings regarding this hypothesis, there is a great deal of concern about ethical, social, and environmental issues that need to be learned before starting any entrepreneurial venture (Kuckertz & Wagner, 2010). If educators can provide knowledge and information regarding the benefits of sustainable entrepreneurship during entrepreneurship education, students will be greatly motivated to start new ventures (Baron & Kenny, 1986). The implication is that if the current entrepreneurial courses or programs are designed or personalized with ethical, social, and environmental concerns, they will enhance the effectiveness and efficiency of entrepreneurship education, which will impact entrepreneurial intentions.

Furthermore, sustainability orientation mitigates the connection between innovativeness and entrepreneurial intention. The indicators of innovativeness are regular engagement in new activities, completing actions differently, continuously searching for new technology and product ideas, developing new and creative ideas, and constantly using innovations in the workplace (Maziriri et al., 2019). Students who are sustainable-oriented seek to use viable technologies. Sometimes, implementing these technologies require extensive knowledge, high cost, and complex infrastructure. Therefore, sustainability orientation negatively affects the relationship between innovativeness and entrepreneurial intention. Although starting a new business with sustainable growth without innovativeness is difficult, it can be acquired through entrepreneurship education.

5. Conclusion

This study investigated the impact of entrepreneurial characteristics and entrepreneurship education on business students' entrepreneurial intentions. The findings shed light on the multifaceted landscape of entrepreneurial intention, which is significantly influenced by two characteristic variables (e.g., innovativeness and self-confidence) and entrepreneurship education, with the strong moderating effect of sustainable orientation on the ties of innovativeness and entrepreneurship education with entrepreneurial intention. These variables collectively shape Bangladeshi business graduates' mindsets toward entrepreneurial ventures. This study highlights the role of innovativeness needed to foster an environment ripe for entrepreneurial intent to ignite the spark of creativity and differentiation crucial for start-ups. Simultaneously, students' self-confidence can be influential, encouraging entrepreneurs to navigate uncertainties and setbacks inherent to the entrepreneurial journey. Additionally, the findings reveal that students' intention to act is significantly influenced by entrepreneurship education, which can equip them with the necessary tools, knowledge, and skills to transform their aspirations into the implementation of start-ups. Entrepreneurship education imparts practical insights and cultivates a mindset to identify opportunities and manage challenges to bolster the likelihood of translating intention into entrepreneurial action. However, the findings indicate that the ties between the need for achievement and autonomy and entrepreneurial intention are significant in Bangladesh. Even in many studies, the need for achievement and autonomy are noted

as propellers to pursuing challenges and seeking success aligning seamlessly with the freedom to manifest the risk-taking nature of entrepreneurship. The study's findings can provide valuable insights for stakeholders ranging from educators to policymakers, collaboratively fostering an ecosystem conducive to nurturing and realizing entrepreneurial intent. Ultimately, harmonizing and managing these influential variables can pave the way for a future enriched by enterprising ventures that drive economic progress and contribute to societal development.

4.7. Theoretical Contributions

This study's main theoretical contribution comes from its examination of the effects of entrepreneurial traits (such as inventiveness, need for achievement, autonomy, and self-confidence), as well as entrepreneurship education, on entrepreneurial intentions among university students in a developing nation. This investigation was done under the guidance of the Theory of Planned Behaviour (TPB) principles. Additionally, this study adds an empirical component to the body of literature already available about the entrepreneurial inclinations of business graduates. Notably, this study appears to be among the first to examine how education in entrepreneurial characteristics, entrepreneurial intention, and sustainability issues interact when applied to developing economies. The theoretical foundation of the study, which is based on TPB, emphasises the important and advantageous connection between entrepreneurial education and entrepreneurial intention. In addition, the moderating role of sustainability orientation in the relationship between observed and unobserved variables is measured through structural model development. The uniqueness of this study is its empirical analysis, which identifies the crucial factors influencing entrepreneurial intentions among business graduates. Theoretically, this study also supports and advances the original intention model, particularly the TPB, as a potential predictor of the effectiveness of entrepreneur education programs. Additionally, by examining the factors that affect the relationship between entrepreneurial education and intention, this study takes a contingency viewpoint. Even though there have been several research that have examined the connection between entrepreneurial education and entrepreneurial drive (e.g., Al-Mamary & Alshallaqi, 2022), this research deepens our understanding of this relationship by examining the moderating impact of sustainability orientation on the associations between various aspects of entrepreneurship education and entrepreneurial intention.

4.8. Practical Implications

This investigation has noteworthy consequences for students, academics, entrepreneurs, the government, and the country. This study incorporates entrepreneurship education with the entrepreneurial intention to foster an entrepreneurial mindset among Bangladeshi business graduates. This study has shown that business academics should think about changing the educational system to encourage students to have a stronger propensity for entrepreneurship. Moreover, the findings shed light on the necessity for educational institutions and governments to implement entrepreneurship programs aimed at increasing the intention of graduate students to start new businesses. Therefore, this study draws policymakers' attention to entrepreneurship education, entrepreneurial intention, and entrepreneurship. Regarding application, entrepreneurial education and personal characteristics, including innovativeness, need for achievement, autonomy, and self-confidence, are essential for identifying and inspiring students. This is especially important for students who have never been exposed to entrepreneurship or had negative entrepreneurial experiences. This can provide decisionmakers and educators a better understanding of these occurrences, allowing for more efficient interventions to increase the number of aspiring entrepreneurs. Additionally, the research provides valuable guidance for instructors in designing courses that allow them to create more effective entrepreneurship classes. Topics such as business planning, role models, the value of entrepreneurial networks, and feedback methods are all included in advice. Additionally, this strategy promotes a sincere entrepreneurial ethos. Nevertheless, this study outcomes influence public and private universities to have a broader purview of entrepreneurial courses that include a variety of subjects outside the conventional scope of business-related disciplines, such as engineering, medicine, geography, and history. This extensive use would develop a climate where anyone could start a business and cultivate a thorough understanding of entrepreneurship. Limitations and future research directions.

Despite the fact that this study contributes to the existing body of knowledge already available on entrepreneurship and entrepreneurial development, it involves some limitations and gaps that can be abridged in undertaking future

research. First, the study only considers four entrepreneur characteristics: innovativeness, need for achievement, autonomy, and self-confidence. Future studies should be initiated with other personal variables, such as risk-taking propensity, tolerance of ambiguity, subjective knowledge, and perceived social image. The current study can also be extended to include more specific variables involved in entrepreneurship education (e.g., existing curriculum, lecture notes, and syllabus). Second, the study shows the moderating effect of sustainable orientation with no mediation effect. The integration of both moderation and mediation can illustrate a certain behavior more comprehensively. Thus, we suggest extending the current study with both moderation and mediation. Additionally, the categorical variables (e.g., age, gender, education, experience, income, etc.) can be employed in future research to understand their moderation role in examining entrepreneurial intention. Third, this research solely investigates entrepreneurial intention regardless of actual and post-action behaviors such as satisfaction, well-being, and recommendation to others. Hence, future studies can also be extended to understand entrepreneurial intention and post-action behaviors. Finally, the investigation only includes a particular sample of respondents (e.g., business graduates) in Bangladesh. The results might vary if the study is conducted with another group of respondents (e.g., professional jobholders). Thus, future research is recommended with various groups of people in different contexts, such as countries and cultures.

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References

- Aharonovich, A. R. (2019). Socio-economic importance of state support for youth innovative entrepreneurship in the economic development of the state. *Academy of Entrepreneurship Journal*, 25, 1-6.
- Ajose, O. A. (2021). *Entrepreneurship Training and the Intention to Start New Ventures Among Selected Undergraduates in South-West, Nigeria* (Doctoral dissertation, Kwara State University (Nigeria)).
- Ajzen, I. (1991). The theory of planned behavior. *Organizational behavior and human decision processes*, 50(2), 179-211.
- Ajzen, I., Fishbein, M. (1977). Attitude-behavior relations: a theoretical analysis and review of empirical research. *Psychological Bulletin*, 84, 888-918.
- Al Mamun, A., Kumar, N., Ibrahim, M. D., & Bin, M. N. H. (2017). Validating the measurement of entrepreneurial orientation. *Economics & Sociology*, 10(4), 51-66.
- Al-Mamary, Y. H., & Alshallaqi, M. (2022). Impact of autonomy, innovativeness, risk-taking, proactiveness, and competitive aggressiveness on students' intention to start a new venture. *Journal of Innovation & Knowledge*, 7(4), 100239.
- Anderson J C and Gerbing D W (1988), "Structural Equation Modeling in Practice: A Review and Recommended Two-Step Approach", *Psychological Bulletin*, 103(3), 411-423.
- Arenius, P., & Minniti, M. (2005). Perceptual variables and nascent entrepreneurship. *Small business economics*, 24, 233-247.
- Astiana, M., Malinda, M., Nurbasari, A., & Margaretha, M. (2022). Entrepreneurship Education Increases Entrepreneurial Intention among Undergraduate Students. *European Journal of Educational Research*, 11(2), 995-1008.
- Barba-Sanchez, V. and Atienza-Sahuquillo, C. (2017), "Entrepreneurial motivation and selfemployment: evidence from expectancy theory", *International Entrepreneurship and Management Journal*, 13, 1097-1115.
- Barbosa, B., Saura, J. R., & Bennett, D. (2022). How do entrepreneurs perform digital marketing across the customer journey? A review and discussion of the main uses. *The Journal of Technology Transfer*, 1-35.
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of personality and social psychology*, 51(6), 1173.
- Bell, D. N., & Blanchflower, D. G. (2019). The well-being of the overemployed and the underemployed and the rise in depression in the UK. *Journal of Economic Behavior & Organization*, 161, 180-196.
- Bilal, M., Chaudhry, S., Amber, H., Shahid, M., Aslam, S., & Shahzad, K. (2021). Entrepreneurial leadership and

- employees' proactive behaviour: Fortifying self determination theory. *Journal of Open Innovation: Technology, Market, and Complexity*, 7(3), 176.
- Brunel, O., Laviolette, E. M., & Radu-Lefebvre, M. (2017). Role models and entrepreneurial intention: the moderating effects of experience, locus of control and self-esteem. *Journal of enterprising culture*, 25(02), 149-177.
- Charney, A., Libecap, G. D., & Center, K. E. (2000). The impact of entrepreneurship education: An evaluation of the Berger Entrepreneurship Program at the University of Arizona. *The Karl Eller Center of the College of Business and Public Administration*.
- Chen, C. C., Greene, P. G., & Crick, A. (1998). Does entrepreneurial self-efficacy distinguish entrepreneurs from managers? *Journal of business venturing*, 13(4), 295-316.
- De Guzman, M. R. T., Kim, S., Taylor, S., & Padasas, I. (2020). Rural communities as a context for entrepreneurship: Exploring perceptions of youth and business owners. *Journal of Rural Studies*, 80, 45-52.
- Doll, W. J., Xia, W., & Torkzadeh, G. (1994). A confirmatory factor analysis of the enduser computing satisfaction instrument. *MIS Quarterly*, 18(4), 453-460.
- Douglas, E. J., & Shepherd, D. A. (2002). Self-employment as a career choice: Attitudes, entrepreneurial intentions, and utility maximization. *Entrepreneurship theory and practice*, 26(3), 81-90.
- Duong, C. D. (2022). Exploring the link between entrepreneurship education and entrepreneurial intentions: the moderating role of educational fields. *Education+ Training*, 64(7), 869-891.
- Duong, C. D., Wach, K., Vu, N. X., Ha, S. T., & Nguyen, B. N. (2022). Entrepreneurial education, government policies and programmes, and entrepreneurial behaviour: A serial moderated mediation model. *Entrepreneurial Business and Economics Review*, 10(4), 37-54.
- Erickson, G. S. (2017). Descriptive research design. In *New Methods of Market Research and Analysis* (pp. 51-77). Edward Elgar Publishing.
- Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Comparison of convenience sampling and purposive sampling. *American journal of theoretical and applied statistics*, 5(1), 1-4.
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39-50.
- Gelaidan, H. M., & Abdullateef, A. O. (2017). Entrepreneurial intentions of business students in Malaysia: The role of self-confidence, educational and relation support. *Journal of small business and Enterprise Development*, 24(1), 54-67.
- Gielnik, M. M., Frese, M., Bischoff, K. M., Muhangi, G., & Omoo, F. (2019). Positive impact of entrepreneurship training on entrepreneurial behavior in a vocational training setting. In *Entrepreneurship in Africa* (pp. 96-114). Routledge.
- Giacomin, O., Janssen, F., Pruett, M., Shinnar, R. S., Llopis, F., & Toney, B. (2011). Entrepreneurial intentions, motivations and barriers: Differences among American, Asian and European students. *International Entrepreneurship and Management Journal*, 7, 219-238.
- Hair, J. F. (2010). Black. WC, Babin. BJ; and Anderson. RE (2010), *Multivariate Data Analysis*.
- Honeyman, C. A. (2020). *The orderly entrepreneur: Youth, education, and governance in Rwanda*. Stanford University Press.
- Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 1-55.
- Karimi, S., Biemans, H.J.A., Mahdei, K.N., Lans, T., Chizari, M. and Mulder, M. (2015). Testing the relationship between personality characteristics, contextual factors and entrepreneurial intentions in a developing country. *International Journal of Psychology*, 52(3), 227-240.
- Kasouf, C. J., Morrish, S. C., & Miles, M. P. (2015). The moderating role of explanatory style between experience and entrepreneurial self-efficacy. *International Entrepreneurship and Management Journal*, 11, 1-17.
- Kline, R. B. (2011). *Principles and practice of structural equation modeling*. Guilford Press.
- Kline, R. B. (2015). *Principles and Practice of Structural Equation Modeling* (4th ed.). Guilford publications.
- Koh, H. C. (1996). Testing hypotheses of entrepreneurial characteristics: A study of Hong Kong MBA students. *Journal of managerial Psychology*, 11(3), 12-25.
- Krueger Jr, N. F., Reilly, M. D., & Carsrud, A. L. (2000). Competing models of entrepreneurial intentions. *Journal of business venturing*, 15(5-6), 411-432.
- Krueger, N. F., & Carsrud, A. L. (1993). Entrepreneurial intentions: Applying the theory of planned behaviour. *Entrepreneurship & regional development*, 5(4), 315-330.
- Kuckertz, A., & Wagner, M. (2010). The influence of sustainability orientation on entrepreneurial intentions—Investigating the role of business experience. *Journal of business venturing*, 25(5), 524-539.
- Kuckertz, A., & Wagner, M. (2010). The influence of sustainability orientation on entrepreneurial intentions—Investigating the role of business experience. *Journal of business venturing*, 25(5), 524-539.
- Lai, K. P., Nathan, R. J., Tan, K. S., & Chan, B. B. (2010). Effect of innovation to the success of female entrepreneurs. *Journal of innovation management in small and medium enterprises*, 2010(1), 1-14.
- Lent, R. W., Brown, S. D., & Hackett, G. (1994). Toward a unifying social cognitive theory of career and academic

- interest, choice, and performance. *Journal of vocational behavior*, 45(1), 79-122.
- Lyons, E., & Zhang, L. (2018). Who does (not) benefit from entrepreneurship programs?. *Strategic Management Journal*, 39(1), 85-112.
- Lumpkin, G. T., & Dess, G. G. (1996). Clarifying the entrepreneurial orientation construct and linking it to performance. *Academy of management Review*, 21(1), 135-172.
- Lüthje, C., & Franke, N. (2003). The 'making' of an entrepreneur: testing a model of entrepreneurial intent among engineering students. *MIT. R&D Management*, 33(2), 135-147.
- Maziriri, E. T., Maramura, T. C., & Nzewi, O. I. (2019). Determinants of Entrepreneurial Intention among Generation Y Students within the Johannesburg Metropolitan Area of South Africa. *African Journal of Business & Economic Research*, 14(3), 25.
- Maziriri, E. T., Nyagadza, B., & Chuchu, T. (2022). Innovation conviction, innovation mindset and innovation creed as precursors for the need for achievement and women's entrepreneurial success in South Africa: entrepreneurial education as a moderator. *European Journal of Innovation Management*, (ahead-of-print).
- Mehta, A. M., Qamruzzaman, M. D., & Serfraz, A. (2022). The effects of finance and knowledge on entrepreneurship development: An empirical study from Bangladesh. *The Journal of Asian Finance, Economics and Business*, 9(2), 409-418.
- Melati, I. N., Wilopo, R., & Hapsari, I. (2018). Analysis of the effect of fraud triangle dimensions, self-efficacy, and religiosity on academic fraud in accounting students. *The Indonesian Accounting Review*, 8(2), 187-202.
- Mitchell, R. K., Busenitz, L., Lant, T., McDougall, P. P., Morse, E. A., & Smith, J. B. (2002). Toward a theory of entrepreneurial cognition: Rethinking the people side of entrepreneurship research. *Entrepreneurship Theory and Practice*, 27(2), 93-104.
- Mueller, S. L., & Thomas, A. S. (2001). Culture and entrepreneurial potential: A nine country study of locus of control and innovativeness. *Journal of Business Venturing*, 16(1), 51-75.
- Nabi, G., & Holden, R. (2008). Graduate entrepreneurship: intentions, education and training. *Education+ training*, 50(7), 545-551.
- Neelankavil, J. P. (2015). *International business research*. Routledge.
- Nowiński, W., Haddoud, M. Y., Lančarič, D., Egerová, D., & Czeglédi, C. (2019). The impact of entrepreneurship education, entrepreneurial self-efficacy and gender on entrepreneurial intentions of university students in the Visegrad countries. *Studies in Higher Education*, 44(2), 361-379.
- Pai, R. R., & Alathur, S. (2019). Determinants of individuals' intention to use mobile health: insights from India. *Transforming Government: People, Process and Policy*, 13(3/4), 306-326.
- Piperopoulos, P., & Dimov, D. (2015). Burst bubbles or build steam? Entrepreneurship education, entrepreneurial self-efficacy, and entrepreneurial intentions. *Journal of small business management*, 53(4), 970-985.
- Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: a critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879.
- Rahman, M. M., Dana, L. P., Moral, I. H., Anjum, N., & Rahaman, M. S. (2022). Challenges of rural women entrepreneurs in Bangladesh to survive their family entrepreneurship: a narrative inquiry through storytelling. *Journal of Family Business Management*.
- Ramadani, V., Rahman, M. M., Salamzadeh, A., Rahaman, M. S., & Abazi-Alili, H. (2022). Entrepreneurship education and graduates' entrepreneurial intentions: Does gender matter? A multi-group analysis using AMOS. *Technological Forecasting and Social Change*, 180, 121693.
- Ramvalho, J., Carvalho, C., Parreira, P., Leite, E., Mónico, L., & Salgueiro-Oliveira, A. (2022). Entrepreneurship in higher education: The key role of self-efficacy-A cross sectional study. *International Journal of Advanced and Applied Sciences*, 9(2), 9-21.
- Rashid, M. H., & Islam, M. A. (2020). Impacts of unemployment on graduates in Bangladesh: a case study. *Br. J. Arts Humanit*, 2(5), 87-94.
- Ravindran, S., & Iyer, G. (2014). Organizational and knowledge management related antecedents of knowledge use: the moderating effect of ambiguity tolerance. *Information Technology and Management*, 156(415), 1-20.
- Ravindran, S., & Iyer, G. S. (2014). Organizational and knowledge management related antecedents of knowledge use: the moderating effect of ambiguity tolerance. *Information Technology and Management*, 15, 271-290.
- Robinson, P. B., Stimpson, D. V., Huefner, J. C., & Hunt, H. K. (1991). An attitude approach to the prediction of entrepreneurship. *Entrepreneurship Theory and Practice*, 15(4), 13-32.
- Sanstad, A.H., Howarth, R.B. (1994). 'Normal' markets, market imperfections and energy efficiency. *Energy Policy*, 22 (10), 811-818.
- Saptono, A., Wibowo, A., Narmaditya, B.S., Karyaningsih, R.P.D., Yanto, H. (2020). Does entrepreneurial education matter for Indonesian students' entrepreneurial preparation: the mediating role of entrepreneurial mindset and knowledge. *Cogent Edu*. 7(1).
- Schlaegel, C., & Koenig, M. (2014). Determinants of entrepreneurial intent: A meta-analytic test and integration

- of competing models. *Entrepreneurship theory and practice*, 38(2), 291-332.
- Schneck, S. (2014). Why the self-employed are happier: Evidence from 25 European countries. *Journal of Business Research*, 67(6), 1043-1048.
- Shapiro, A., & Sokol, L. (1982). The social dimensions of entrepreneurship. University of Illinois at Urbana-Champaign's Academy for Entrepreneurial Leadership Historical Research Reference in Entrepreneurship.
- Sivarajah, K., & Achchuthan, S. (2013). Entrepreneurial intention among undergraduates: Review of literature. *European Journal of Business and Management*, 5(5), 172-186.
- Slavtchev, V., Laspita, S., & Patzelt, H. (2012). Effects of entrepreneurship education at universities. *Jena Economic Research Papers*, 25, 1–33.
- Souitaris, V., Zerbini, S., & Al-Laham, A. (2007). Do entrepreneurship programmes raise entrepreneurial intention of science and engineering students? The effect of learning, inspiration and resources. *Journal of Business Venturing*, 22(4), 566-591.
- Staniewski, M. and Awruk, K. (2015). Motivating factors and barriers in the commencement of one's own business for potential entrepreneurs. *Economic Research-Ekonomska Istra Zivanja*, 28(1), 583-592.
- Tabachnick, B. G., & Fidell, L. S. (2014). Using multivariate statistics. *Harlow. Essex: Pearson Education Limited*.
- Tounès, A., & Fayolle, A. (2006). L'odyssée d'un concept et les multiples figures de l'entrepreneur. *La Revue des sciences de gestion*, (4), 17-30.
- Turker, D. and Selcuk, S. S. (2009). Which factors affect entrepreneurial intention of university students?'. *Journal of European Industrial Training*, 33(2), 142–159.
- Uddin, M., Chowdhury, R. A., Hoque, N., Ahmad, A., Mamun, A., & Uddin, M. N. (2022). Developing entrepreneurial intentions among business graduates of higher educational institutions through entrepreneurship education and entrepreneurial passion: A moderated mediation model. *The International Journal of Management Education*, 20(2), 100647.
- Uju, M., & Racheal, J. A. C. (2018). Impact of entrepreneurial skills in reducing youth unemployment in Nigeria. *European journal of business, economics and accountancy*, 6(3), 1-12.
- Van Gelderen, M., Brand, M., Van Praag, M., Bodewes, W., Poutsma, E., & Van Gils, A. (2008). Explaining entrepreneurial intentions by means of the theory of planned behaviour. *Career development international*, 13(6), 538-559.
- Vogel, P. (2015). The youth unemployment crisis and the threat of a “generation jobless”. In *Generation jobless? Turning the youth unemployment crisis into opportunity* (pp. 3-44). London: Palgrave Macmillan UK.
- Wang, C., Mundorf, N., & Salzarulo-McGuigan, A. (2022). Entrepreneurship education enhances entrepreneurial creativity: The mediating role of entrepreneurial inspiration. *The International Journal of Management Education*, 20(2), 100570.
- Wardana, L.W., Narmaditya, B.S., Wibowo, A., Mahendra, A.M., Wibowo, N.A., Harwida, G., Rohman, A.N. (2020). The impact of entrepreneurship education and students' entrepreneurial mindset: the mediating role of attitude and self-efficacy. *Heliyon*, 6(9).
- Wathanakom, N., Khlaisang, J., & Songkram, N. (2020). The study of the causal relationship between innovativeness and entrepreneurial intention among undergraduate students. *Journal of Innovation and Entrepreneurship*, 9, 1-13.
- Westhead, P., & Solesvik, M. Z. (2016). Entrepreneurship education and entrepreneurial intention: Do female students benefit?. *International small business journal*, 34(8), 979-1003.
- Wilson, F., Kickul, J., & Marlino, D. (2007). Gender, entrepreneurial self-efficacy, and entrepreneurial career intentions: Implications for entrepreneurship education. *Entrepreneurship Theory and Practice*, 31(3), 387-406.
- Yang, J., Antin, P., Berx, G., Blanpain, C., Brabletz, T., Bronner, M., & EMT International Association (TEMTIA). (2020). Guidelines and definitions for research on epithelial–mesenchymal transition. *Nature Reviews Molecular Cell Biology*, 21(6), 341-352.
- Zayed, N. M., & Tumpa, S. R. (2016). Factors affecting career decision in study and work life in Bangladesh.